

1745  
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Jeffrey A. Colborn et al.

Application No.: 10/058,231

Filed: October 19, 2001

For: **METHODS OF USING FUEL CELL  
SYSTEM CONFIGURED TO  
PROVIDE POWER TO ONE OR  
MORE LOADS**

Art Unit: 1745

Examiner: To be assigned

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**TRANSMITTAL OF PETITION TO MAKE SPECIAL  
UNDER 37 C.F.R. §1.102(c)**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Applicants submit the following documents for appropriate action by the U.S. Patent and  
Trademark Office:

- ☒ Petition to Make Special Under 37 C.F.R. §1.102(c);
- ☒ Declaration of Assignee in Support of Petition to Make Special Under 37 C.F.R. §1.102(c) (Exhibit A);
- ☒ Copies of previous decisions to Make Special (Exhibit B);

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CERTIFICATE OF MAILING  
(37 C.F.R. §1.8a)

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as First Class Mail in an envelope addressed to the Commissioner for Patents, Washington, D.C. 20231.

March 21, 2002  
Date of Deposit

Diana Vilkaitis  
Name of Person Mailing Paper

  
Signature of Person Mailing Paper

☒ Return postcard.

Applicant believes no fees are due in connection with this Petition. However, if any fees are in fact due, the Commissioner is hereby authorized to charge to our Deposit Account No. 08-3038 referencing Docket No. 04813.0026.NPUS00.

Respectfully submitted,

Dated: March 21, 2002.



Robert C. Laurenson, Reg. No. 34,206

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PETITION TO MAKE SPECIAL  
UNDER 37 C.F.R. §1.102(c)

Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

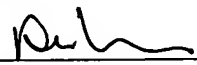
INTRODUCTION

This is a Petition to Make Special the above-identified patent application under 37 C.F.R. §1.102(c). This Petition is based on the Declaration of Jeffrey A. Colborn, the authorized representative of the Assignee, attached hereto as Exhibit A, the decisions on the petitions to

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Signature of Person Mailing Paper

make special for Assignee's related applications, attached hereto as Exhibit B, and the grounds set forth in 37 C.F.R. §1.102(c) and MPEP 708.02 V. and VI(B).

The Petition should be granted, and the application accorded special status, for three distinct reasons. First, as set forth in the Declaration, the application meets the criteria of MPEP 708.02 V. Second, as also set forth in the Declaration, the application meets the criteria of MPEP 708.02 VI(B). Third, a decision according the application special status is supported by the numerous decisions on petitions according special status to all of the related applications of the Assignee. These points are explained further as follows:

**I. THE APPLICATION MEETS THE CRITERIA OF MPEP 708.02**

As set forth in the attached Declaration, the application meets the criteria of MPEP 708.02 V for at least the following reasons:

1. By replacing polluting diesel generators as back-up power sources for buildings, the refuelable and/or regenerative fuel cell system relating to the invention is expected to materially enhance the quality of the environment by contributing to the restoration and maintenance of the air. (Decla. ¶2).

2. By replacing diesel generators, the refuelable and/or regenerative fuel cell system is also expected to eliminate the need for lubricating oil for diesel generators, and therefore materially enhance the quality of the environment by contributing to the restoration and maintenance of water. (Decla. ¶3).

3. By replacing lead/acid batteries, the refuelable and/or regenerative fuel cell system is also expected to materially enhance the quality of the environment by reducing the damage to the earth caused by the mining of lead, thereby contributing to the restoration and maintenance of the soil. (Decla. ¶4).

4. By enabling solar/wind power to replace power plants as the primary energy source for a substantial number of homes and businesses, the refuelable and/or regenerative fuel cell

system is expected to materially enhance the quality of the environment by contributing to the restoration or maintenance of the air. (Decla. ¶¶5-6).

5. By increasing the efficiency of the power grid, the refuelable and/or regenerative fuel cell system is expected to result in introduction of less pollutants into the air since less fossil fuel needs to be burned to provide the same power output. Consequently, the system is expected to materially enhance the quality of the environment by contributing to the restoration and maintenance of the air. (Decla. ¶¶7-10).

## **II. THE APPLICATION MEETS THE CRITERIA OF MPEP 708.02 VI(B)**

A second independent basis for according the application special status is that it meets the criteria of MPEP 708.02 VI(B). As set forth in the attached Declaration, the application meets these criteria for at least the following reasons:

1. The invention relates to a refuelable and/or regenerative fuel cell system in which a refuelable and/or regenerative fuel cell is interfaced to the power grid and to an energy controller in a home or business which controls one or more loads, e.g., elevators, lights, air conditioners, household appliances such as refrigerators, etc. During off-peak hours, when energy from the power grid is cheapest, the system may draw energy from the power grid in order to reprocess spent reaction solution and reaction products into metal fuel and fresh reaction solution. In addition, whenever energy is needed to drive the loads, the energy controller selectively draws energy from the refuelable and/or regenerative fuel cell to drive the one or more loads in an energy efficient manner. For example, the controller can automatically turn off lights and air conditioners during off-business hours and power them up again during business hours. The ability of the system to store energy in the form of the fuel allows the two processes --the process of reprocessing spent reaction products and the process of driving one or more loads--to be decoupled from one another, i.e., performed substantially independently of one another. (Decla. ¶7).

2. The system is expected to increase the efficiency of the power grid in terms of wattage out divided by quantity of fossil fuel burned. The reason is that the system, because of its capability to store energy in the form of electrochemical fuel, and to decouple the processes of reprocessing spent reaction products and driving loads, is expected to result in more frequent use of base load power plants and less frequent use of peaking plants to drive the power grid. Since base load plants are more efficient than peaking plants, e.g., 60 % vs. 35 %, the result is an overall increase in the efficiency of the power grid. (Decla. ¶8).

3. To explain why this is so, consider a scenario such as a hot day where the demand exceeds the supply for power from base load power plants. Currently, the response to this scenario will be to power up the less efficient peaking plants to fill the gap between demand and supply. However, with the refuelable and/or regenerative fuel cell system, the response to this scenario is expected to be the use of the refuelable and/or regenerative fuel cell to fill the gap between demand and supply. (Decla. ¶9).

4. The increased efficiency of the power grid means that the refuelable and/or regenerative fuel cell system is expected to materially contribute to the reduction of energy consumption in combustion systems, industrial equipment, household appliances, etc. (Decla. ¶11).

**III. A DECISION ACCORDING THE APPLICATION SPECIAL STATUS IS SUPPORTED BY THE NUMEROUS DECISIONS ACCORDING SPECIAL STATUS TO ASSIGNEE'S RELATED APPLICATIONS**

A decision according the application special status is also supported by the decisions according special status to all of Assignee's related applications. These related applications consist of U.S.S.N. 09/353,422 (now U.S. Patent No. 6,162,555); 09/449,176 (now U.S. Patent No. 6,153,328); 09/521,392; 09/573,438; and 09/627,742. The decisions on the petitions for these related applications are attached hereto as Exhibit B.


**CONCLUSION**

For all the foregoing reasons, this Petition is proper in all respects, and should be granted.

There is no Petition fee required pursuant to 37 C.F.R. §1.102(c) and/or MPEP §708.02, and therefore no payment is enclosed herewith. However, if a fee is in fact due, the Commissioner is authorized to charge the same to our Deposit Account No. **08-3038**, referencing Docket No. 04813.0026.NPUS00.

HOWREY SIMON ARNOLD & WHITE, LLP

Date: March 24, 2002

  
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